

# GEOPIER®



## CLIENT'S CHALLENGE

A new, 7-story, mixed-use development consisting of 2 garage levels with 5 residential and retail levels above was planned right across the street from Polar Park – the home of the minor league Worcester Red Sox. The project is the first residential development of a multi-million-dollar planned campus in the Canal District to consist of modern apartment buildings, offices, laboratories, and hotels.

## SUBSURFACE CONDITIONS

The quite problematic subsurface conditions consist of about 10 to 15 feet of granular fill over 0 to 50+ feet of organic soil, with organic contents of up to 390%. Below the organic layer are medium dense to dense glacial soils.

## GEOPIER® SOLUTION

In addition to structural support, the site required up to 11 feet of fill. Our goal for ground improvement was to provide the project team with three things: 1) a consistent, high allowable bearing pressure of 8 ksf that could be used beneath the entire footprint (organic and non-organic areas) that met the project settlement tolerance of 1-inch; 2) quick installation to keep the project on schedule; and 3) an economical solution over deep foundations. We accomplished all three goals by utilizing Geopier GeoConcrete® Columns (GCCs) for foundation and slab support. The GCCs were installed through the new and existing fill/deep organics to bear in the glacial soils.

Our licensee, Helical Drilling, installed 60,000 lf of GCCs in 24 days. To limit the risk to the project team, we implemented a pre-production test program proving we could achieve a capacity of 250 kips per GCC element. **The solution ultimately saved the project several million dollars vs driven piles, which does not account for the savings due to the accelerated construction schedule.**



## WooSox Madison Residential Development

Worcester, Massachusetts

### Madison Properties

Owner

### Plumb House, Inc.

General Contractor

### Sanborn, Head, & Associates

Geotechnical Engineer

### Veitas and Veitas Engineers, Inc.

Structural Engineer

### GEOPIER IS GROUND IMPROVEMENT®

[www.geopier.com](http://www.geopier.com) | (800) 371-7470

